What is claimed is:

1. An interactive electronic classroom system, comprising:

a central computing unit, including a central processor, a monitor, and associated peripheral hardware, for running individual classroom programs, including programs which accept sequences of input to which students provide responses, said peripheral hardware storing said programs and said responses, said central processor providing analyses of said responses, under control of the teacher, via said programs for display on said monitor;

a plurality of student terminals, each including a processing unit, a keyboard, and a display, for receiving said sequences of input from said central computing unit, for executing said input under control of the students to provide said responses, for transmitting said responses to said central computing unit, and for providing feedback to the students;

network means for transmitting information between said central computing unit and said plurality of student terminals, said information including said sequences of input and said responses;

a communication protocol, associated with said central computing unit, said network means, and said plurality of student terminals, for transmitting command data from said central computing unit to said plurality of student terminals, for downloading of ones of said programs from said central computing

unit to said plurality of student terminals, and for transmitting said responses from said plurality of student terminals to said central computing unit;

activation means, associated with said central computing unit, said plurality of student terminals, and said individual classroom programs, for allowing the teacher to initiate and terminate student tasks on said interactive electronic classroom system, said tasks being associated with said sequences of input, such that each of said plurality of student terminals provides said responses to said sequences of input at a pace that is under the control of the teacher, with said responses being transmitted to and monitored by said central computing unit;

information means for viewing and analyzing said responses; and

electronic display means for displaying information, by the teacher to the students.

2. A system as claimed in claim 1, wherein said activation means further comprises means for providing said responses to said sequences of input at a pace that is under the control of both the teacher and each of the students.

3. A system as claimed in claim 1, wherein said activation means further comprises means for specifying a time duration for provision of said responses.

4. A system as claimed in claim 1, further comprising control program means for enabling the teacher, during a class, to select, retrieve, and use said sequences of input.

5. A system as claimed in claim 4, wherein said control program means enables selection, retrieval, and use of a subset of any of said sequences of input.

6. A system as claimed in claim 4, wherein said control program means further comprises means for enabling the teacher, during a class, to enter, in real time, a new sequence of input.

7. A system as claimed in claim 1, wherein said information means further comprises means for viewing previously prepared ones of said sequences of input.

8. A system as claimed in claim 1, wherein said communication protocol transmits said command data and downloads said ones of said programs from said central computing unit to said plurality of student terminals, both selectively and collectively.

9. A system as claimed in claim 1, further comprising database means for storing class records and said responses in accordance with a selectable format.

10. A system as claimed in claim 9, wherein said database means includes means for storing class rolls, student attendance records, and said sequences of input.

11. A system as claimed in claim 10, wherein said database means comprises a program selected from the group consisting of

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dBase(tm), RBase(tm), Symphony(tm), Lotus 1-2-3(tm), Quattro(tm), Excel(tm), Paradox(tm), FoxBase(tm), and Hypercard(tm).

12. A system as claimed in claim 11, wherein said information means comprises a program selected from the group consisting of dBase(tm), RBase(tm), Symphony(tm), Lotus 1-2-3(tm), Quattro(tm), Paradox(tm), FoxBase(tm), and Hypercard(tm).

13. A system as claimed in claim 1, wherein said information means comprises a program selected from the group consisting of dBase(tm), RBase(tm), Symphony(tm), Lotus 1-2-3(tm), Quattro(tm), Paradox(tm), FoxBase(tm), and Hypercard(tm).

11 ~~14~~. A system as claimed in claim 1, wherein said ~~information~~ viewing and analyzing means includes means for viewing and analyzing said responses both during and after a classroom session.

15. A system as claimed in claim 1, wherein said information means includes means for analyzing responses to questions in accordance with question type.

13 ~~16~~. A system as claimed in claim 1, further comprising preparation means for enabling preparation of said sequences of input for use during a class, and for storing said sequences of input for later use.

14 ~~17~~. A system as claimed in claim 13 ~~16~~, wherein said preparation means comprises means for displaying teacher choices in a menu format.

15 ~~18~~. A system as claimed in claim 13 ~~16~~, wherein said preparation means comprises language means, selected from the group consisting of high level programming languages, low level programming languages, and computer-responsive languages, for enabling preparation of said sequences of input.

16 ~~19~~. A system as claimed in claim 15 ~~18~~, further comprising a subroutine library, callable by said language means, for preparing said sequences of input.

a 17 ~~20~~. A system as claimed in claim 1, wherein said ~~control language~~ activation means comprises means for displaying teacher choices in a menu format.

18 ~~21~~. A system as claimed in claim 1, further comprising grading means for enabling a teacher to assign grades to said responses.

19 ~~22~~. A system as claimed in claim 1, further comprising logon means for identifying the students individually to the system by personal identity and by location in the classroom.

Sub a3 23. A system as claimed in claim 1, wherein said central computing unit comprises a computer selected from the group consisting of an IBM PC, an IBM PC-XT, an IBM PC-AT, a computer compatible with at least one of the IBM PC, IBM PC-XT, and IBM PC-AT, an IBM PS/2, an Apple II series computer, an Apple MacIntosh series computer, a NeXT computer, a Sun computer, an Apollo computer, and a Digital Equipment Corporation (DEC) computer.

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24. A system as claimed in claim ~~1~~, wherein said central computing unit comprises a computer which runs under an operating system selected from the group consisting of the DOS family, the OS/2 family, the Apple family, the VAX VMS family, and the UNIX family.

25. A system as claimed in claim 1, further comprising means for transmitting prerecorded video information to said electronic display means for viewing by said students.

26. A system as claimed in claim 1, wherein said network means comprises a local area network (LAN) selected from the group consisting of Ethernet (tm), Appletalk (tm), Arcnet (tm), Novell, and IBM Token Ring.

~~23~~27. A system as claimed in claim 1, wherein said ~~sequences of input~~ student tasks are compiled from the group consisting of questions, quizzes, tests, classroom exercises, didactic programs, instructional games, simulations, and homework.

~~24~~28. A system as claimed in claim 1, wherein said network means comprises at least one network controller.

~~25~~29. A system as claimed in claim 1, wherein said communication protocol allows transmission of said data from said central ~~computing unit~~ computer to only one of said plurality of student terminals at a time.

~~26~~30. A system as claimed in claim 1, wherein said communication protocol allows transmission of said data from said central ~~computing unit~~ computer simultaneously to a selected subset

consisting of fewer than all of said plurality of student terminals.

31. A system as claimed in claim 1, wherein said communication protocol allows transmission of data from said central computing unit simultaneously to a plurality of selected subsets each consisting of fewer than all of said plurality of student terminals.

32. A system as claimed in claim 1, wherein said activation means allows each of said plurality of student terminals to receive said sequences of input at each student's own pace.

33. A system as claimed in claim 1, wherein said activation means allows each of said plurality of student terminals to receive said sequences of input in lockstep with all others of said plurality of student terminals.

34. A system as claimed in claim 1, wherein said activation means allows one of said plurality of student terminals within a selected subset, consisting of fewer than all of said plurality of student terminals, to receive said sequences of input in lockstep with all others of said plurality of student terminals within said selected subset.

35. A system as claimed in claim 34, wherein said activation means allows all of said plurality of student terminals within said selected subset to receive said sequences of input in lockstep with other selected subsets.

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~~36~~. A system as claimed in claim 1, wherein said electronic display means comprises a display selected from the group consisting of a liquid crystal display, a color television, and a color television projector.

add 46

60 claim 32-49